VERSION OF AMENDMENT WITH MARKINGS SHOWING CHANGES

IN THE CLAIMS:

43. (Amended) [An] A wholly implantable glucose monitoring device, comprising:

a housing [adapted] of size and configuration for whole implantation into a host; and

a sensor supported by said housing for communication with tissue of said host, said sensor capable of continuous glucose sensing comprising (i) a member for determining the amount of glucose in biological fluid of said host, and (ii) a bioprotective member disposed more distal to said housing than said glucose determining member and including a bioprotective membrane that is substantially impermeable to macrophages and permeable to glucose and oxygen.

47. (Amended) An implantable glucose monitoring device of claim [43] 46, wherein said securing member comprises poly(ethylene terephthalate).

Please cancel claims 1-27, without prejudice.

New claims 51-71 have been added as follows:

51. (New) An implantable glucose monitoring device of claim 43, said housing including a cavity contained therewithin.

52. (New) An implantable glucose monitoring device of claim 51, wherein said sensor is within said housing cavity.

53. (New) A biological fluid measuring device, comprising:

(a) a housing comprising an electronic circuit and at least two electrodes operably connected to said electronic circuit; and

(b) a sensor operably connected to said electrodes of said housing, said sensor comprising (i) a bioprotective membrane, and (ii) an angiogenic layer, said angiogenic layer positioned more distal to said housing than said bioprotective membrane.

54. (New) The biological fluid measuring device of claim 53, wherein said bioprotective membrane is substantially impermeable to macrophages.

55. (New) The biological fluid measuring devise of claim 53, wherein said bioprotective membrane comprises pores, said pores having diameters ranging from about 0.1 micron to about 1.0 micron.

56. (New) The biological fluid measuring device of claim 53, wherein said bioprotective membrane comprises polytetrafluoroethylene.

57. (New) The biological fluid measuring device of claim 53, wherein said angiogenic layer comprises polytetrafluoroethylene.

58. (New) The biological fluid measuring device of claim 53, further comprising (c) a member for securing said device to biological tissue, and securing member associated with said housing.

59. (New) The biological fluid measuring device of claim 58, wherein said securing member comprises poly(ethylene terephthalate).

60. (New) The biological fluid measuring device of claim 53, wherein said sensor further comprises a member for determining the amount of glucose in a biological sample.

61. (New) The biological fluid measuring device of claim 60, wherein said glucose determining member comprises a membrane containing glucose oxidase, said glucose oxidase-

containing membrane positioned more proximal to said housing than said bioprotective membrane.

62. (New) The biological fluid measuring device of claim 53, wherein said housing further comprises an apparatus operatively connected to said electronic circuit for transmitting data to a location external to said device.

63. (New) A device for measuring glucose in a tissue of a host comprising:

a wholly implantable device comprising a sensor capable of continuous glucose sensing, said sensor having an interface tip for communicating with the tissue of said host, said tip comprising a fixation domain adapted for substantial fixation of said tip in a foreign body capsule.

64. (New) The device of claim 63, wherein said wholly implantable device is sized and configured for being wholly implanted subcutaneously.

65. (New) The device of claim 63, wherein said sensor tip fixation domain comprises a capsular attachment layer on said sensor.

66. (New) The device of claim 65, wherein said sensor tip fixation domain further comprises an angiogenic layer on said sensor.

67. (New) The device of claim 65, wherein said capsular attachment layer is non-smooth.

68. (New) The device of claim 67, wherein said non-smooth layer includes surgical grade polyester velour.

69. (New) An implantable device for subcutaneous monitoring of glucose levels, comprising a housing and a sensor capable of continuous glucose sensing, said sensor including an

angiogenic layer for promoting adequate microcirculatory delivery of glucose and oxygen to said sensor.

70. (New) The device of claim 69, wherein said sensor further includes a capsular attachment layer.

71. (New) The device of claim 69, wherein said implantable device is sized and configured for being wholly implanted subcutaneously.